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10/567,776	02/09/2006	Takeshi Iwatsu	284534US6PCT	4018

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EXAMINER
MINCEY, JERMAINE A

ART UNIT	PAPER NUMBER
2165	

NOTIFICATION DATE	DELIVERY MODE
01/18/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 January 2011</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

0. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection.   Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

This is a Non-Final Office Action Correspondence in response to an RCE filed for U.S. Application No. 10/567776 filed on 01/03/2011.

Examiner Acknowledgements

Examiner notes that claims 13 and 14 were added.

Priority

1.   Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent PCT/JP2004/009891 filed on 07/06/2004. The priority date of September 24, 2003 is now perfected.

Information Disclosure Statement

IDS submitted on 07/13/2010 has been considered by the Examiner.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1 and 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable by

Hayakawa et al. U.S. Patent Application Publication No. 2003/0154187 (herein as

'Hayakawa') and further in view of Hu et al. U.S. Patent Application Publication No.

2002/0143727 (herein as 'Hu') and Srinivasan et al. U.S. Patent No. 6,587,856 (herein

as 'Srinivasan').

As to claim 1 Hayakawa teaches a method of updating a database schema for a

database on a communication terminal which stores a plurality of content data,

comprising:

Hayakawa teaches requesting that an update- information providing apparatus

provide update-information "..." and update information about a database schema (Par.

0010 Hayakawa discloses information about a database needs to be updated. Wherein

"requesting" is seen as initiating, wherein "database schema" is seen as information about a database and wherein "update-information" is seen as update file).

"...about a latest version of a program used for the content data on the communication terminal ..." (Par. 0010 and 0011 Hayakawa discloses initiating a notification that application data needs to be updated. Wherein "program to install" is seen as application data).

Hayakawa reference does not teach but Hu teaches corresponding to the latest version, the database schema indication what types of information related to the content data an be stored in the database for each of the plurality of content data (Par. 0047 Hu discloses the XML schema containing the type of data that is located in the data. Wherein "content data" is seen as data).

It would have been obvious for a person of ordinary skill in the art at the time of the invention **was made** to combine Hayakawa's disclosure with the limitation of having the schema information to contain data that relates to the type of data that can be stored with the data content.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

The combined teaching of Haykawa and Hu reference further teaches the following:

receiving the update-information about the program and the update-information about the database schema, both transmitted from the update-information providing

apparatus in response to the request (Par. 0010 Hayakawa discloses receiving a notification that application data needs and information about a database needs to be updated);

updating the program in accordance with the update-information about the program (Par. 0010 Hayakawa discloses updating the application data with the update file, wherein "update information" is seen as the update file);

comparing the database schema used by the updated program with the database schema already used by the communication terminal, in accordance with the update-information about the database schema, in terms of version (Par. 0011 Hayakawa discloses comparing the identification numbers of the application data with the database based upon the update file. Par. 0138 Hayakawa discloses updating information by writing over the previous versions based upon the update file);

updating the database schema used by the communication terminal, in accordance with the update-information about the database schema, when it is determined in the comparing step that the database schema mounted needs to be updated (Par. 0010 Hayakawa discloses updating the database with the update file. Wherein "communication terminal" is seen as any computing device).

Hayakawa in combination with Hu does not teach but Srinivasan teaches a database schema which includes instructions on how to modify a database schema already used by the communication terminal to and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data (Par. Col. 13 Lines 45-65 Srinivasan discloses providing a

sample to be used to modify the schema. Srinivasan discloses storing metadata related to the descriptions of the related multimedia content).

Wherein updating the database schema includes a least modifying a number of columns in the table format of the database schema while the plurality of content data remains stored in a consistent state in the database (Col. 6 Lines 26-30 Srinivasan discloses modifying the table rows in the schema with the data remaining constant).

It would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine Hayakawa's disclosure with the limitation of and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

As to claim 6 Hayakawa in combination with Hu and Srinivasan teaches each and every limitation of claim 1.

In addition Hayakawa teaches wherein in updating the database schema log information is recorded for each command issued to the database to update the database schema (Par. 0014 Hayakawa discloses a recording unit to log editing operation information, wherein "log information" is seen as the log that is produced from the recording unit).

As to claim 7 in Hayakawa teaches a communication terminal comprising:

Hayakawa teaches a processor (Par. 0063 Hayakawa discloses a central processing unit. Where "processor" is seen as central processing unit);

A memory for storing a database which stores a plurality of content data (Par. 0063 Hayakawa discloses a memory for storing);

requesting means requesting that an update- information providing apparatus provide update-information "..." and update information about a database schema (Par. 0010 Hayakawa discloses information about a database needs to be updated. Wherein "requesting" is seen as initiating, wherein "database schema" is seen as information about a database and wherein "update-information" is seen as update file).

"...about a latest version of a program used for the content data on the communication terminal..." (Par. 0010 and 0011 Hayakawa discloses initiating a notification that application data needs to be updated. Wherein "program to install" is seen as application data). Hayakawa reference does not teach but Hu teaches corresponding to the latest version, the database schema indication what types of information related to the content data an be stored in the database for each of the plurality of content data in the format of a table (Par. 0047 Hu discloses the XML schema containing the type of data that is located in the data. Wherein "content data" is seen as data).

It would have been obvious for a person of ordinary skill in the art at the time of the invention **was made** to combine Hayakawa's disclosure with the limitation of having

the schema information to contain data that relates to the type of data that can be stored with the data content.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

The combined teaching of Hayakawa and Hu reference further teaches the following:

receiving means for receiving the update-information about the program and the update-information about the database schema, both transmitted from the update-information providing apparatus in response to the request (Par. 0010 Hayakawa discloses receiving a notification that application data needs and information about a database needs to be updated);

program-updating means for updating the program in accordance with the update-information about the program (Par. 0010 Hayakawa discloses updating the application data with the update file);

comparing means for comparing the database schema used by the program with the database schema already used by the communication terminal, in accordance with the update-information about the database schema, in terms of version (Par. 0011 Hayakawa discloses comparing the identification numbers of the application data with the database based upon the update file. Par. 0138 Hayakawa discloses updating information by writing over the previous versions based upon the update file);

database schema updating means for updating the database schema used by the communication terminal, in accordance with the update-information about the database schema, when the comparing mans determines that the database schema mounted needs to be updated (Par. 0010 Hayakawa discloses updating the database with the update file).

Hayakawa in combination with Hu does not teach but Srinivasan teaches a database schema which includes instructions on how to modify a database schema already used by the communication terminal to and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data (Par. Col. 13 Lines 45-65 Srinivasan discloses providing a sample to be used to modify the schema. Srinivasan discloses storing metadata related to the descriptions of the related multimedia content).

Wherein updating the database schema includes a least modifying a number of columns in the table format of the database schema while the plurality of content data remains stored in a consistent state in the database (Col. 6 Lines 26-30 Srinivasan discloses modifying the table rows in the schema with the data remaining constant).

It would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine Hayakawa's disclosure with the limitation of and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

As to claim 8 Hayakawa teaches a method of providing update-information to a communication terminal which has a database storing a plurality of content data comprising:

Hayakawa teaches storing "..." communication terminal and update-information for a database schema (Par. 0004 and Par. 0011 Hayakawa discloses storing update information. Wherein "update-information for a program" and "update-information for a database" is seen as information).

"... update-information for a latest version of a program used for the content data on the ..." (Par. 0010 and 0011 Hayakawa discloses initiating a notification that application data needs to be updated. Wherein "program to install" is seen as application data).

Hayakawa reference does not teach but Hu teaches corresponding to the latest version, the database schema indication what types of information related to the content data an be stored in the database for each of the plurality of content data in the format of a table (Par. 0047 Hu discloses the XML schema containing the type of data that is located in the data. Wherein "content data" is seen as data).

It would have been obvious for a person of ordinary skill in the art at the time of

the invention **was made** to combine Hayakawa's disclosure with the limitation of having

the schema information to contain data that relates to the type of data that can be

stored with the data content.

A person of ordinary skill in the art at the time of the invention would have been

motivated to make this combination in order to provide the system with the knowledge

of knowing that type of data can be stored in the data content.

The combined teaching of Hayakawa and Hu reference further teaches the

following:

transmitting the update-information for the program and the update-information

for the database schema to the communication terminal when the communication

terminal requests the update-information for the program and the update-information for

the database schema   (Par. 0010 Hayakawa discloses transmitting the update

information when an update is initiated);

wherein the program is updated in the communication terminal in accordance

with the update-information for the program (Par. 0010 Hayakawa discloses updating

the application data with the update file);

the database schema used by the program and the database schema already

used by the communication terminal are compared in terms of version in accordance

with the update-information for the database schema (Par. 0011 Hayakawa discloses

comparing the identification numbers of the application data with the database based

upon the update file. Par. 0138 Hayakawa discloses updating information by writing over the previous versions based upon the update file);

and the database schema used by the communication terminal is updated in accordance with the update-information about the database schema, when it is determined from the result of comparison that the database schema needs to be updated (Par. 0010 Hayakawa discloses updating the database with the update file).

Hayakawa in combination with Hu does not teach but Srinivasan teaches a database schema which includes instructions on how to modify a database schema already used by the communication terminal to and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data (Par. Col. 13 Lines 45-65 Srinivasan discloses providing a sample to be used to modify the schema. Srinivasan discloses storing metadata related to the descriptions of the related multimedia content).

Wherein updating the database schema includes a least modifying a number of columns in the table format of the database schema while the plurality of content data remains stored in a consistent state in the database (Col. 6 Lines 26-30 Srinivasan discloses modifying the table rows in the schema with the data remaining constant).

It would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine Hayakawa's disclosure with the limitation of and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

As to claim 9 Hayakawa teaches an update-information providing apparatus which provides update-information to a communication terminal which has a database storing a plurality of content data, the update-information providing apparatus comprising:

A processor: (Par. 0063 Hayakawa discloses a central processing unit. Where "processor" is seen as central processing unit);

storing means for storing "..." in a communication terminal and update-information for a database schema (Par. 0004 and Par. 0011 Hayakawa discloses storing update information. Wherein "update-information for a program" and "update-information for a database" is seen as information).

"...update-information for a latest version of a program used for the content data on the..." (Par. 0010 and 0011 Hayakawa discloses initiating a notification that application data needs to be updated. Wherein "program to install" is seen as application data).

Hayakawa reference does not teach but Hu teaches corresponding to the latest version, the database schema indication what types of information related to the content data an be stored in the database for each of the plurality of content data in the format

of a table (Par. 0047 Hu discloses the XML schema containing the type of data that is located in the data. Wherein "content data" is seen as data).

It would have been obvious for a person of ordinary skill in the art at the time of the invention **was made** to combine Hayakawa's disclosure with the limitation of having the schema information to contain data that relates to the type of data that can be stored with the data content.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

The combined teaching of Hayakawa and Hu reference further teaches the following:

transmitting means for transmitting the update-information for the program and the update-information for the database schema to the communication terminal when the communication terminal requests the update-information for the program and the update-information for the database schema (Par. 0010 Hayakawa discloses transmitting the update information when an update is initiated);

wherein the program is updated in accordance in the communication terminal with the update-information for the program (Par. 0010 Hayakawa discloses updating the application data with the update file);

the database schema used by the program and the database schema already used by the communication terminal are compared in terms of version in accordance with the update-information for the database schema (Par. 0011 Hayakawa discloses

comparing the identification numbers of the application data with the database based upon the update file. Par. 0138 Hayakawa discloses updating information by writing over the previous versions based upon the update file);

the database schema used by the communication terminal is updated in accordance with the update-information about the database schema, when it is determined from the result of comparison that the database schema needs to be updated (Par. 0010 Hayakawa discloses updating the database with the update file).

Hayakawa in combination with Hu does not teach but Srinivasan teaches a database schema which includes instructions on how to modify a database schema already used by the communication terminal to and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data (Par. Col. 13 Lines 45-65 Srinivasan discloses providing a sample to be used to modify the schema. Srinivasan discloses storing metadata related to the descriptions of the related multimedia content).

Wherein updating the database schema includes a least modifying a number of columns in the table format of the database schema while the plurality of content data remains stored in a consistent state in the database (Col. 6 Lines 26-30 Srinivasan discloses modifying the table rows in the schema with the data remaining constant).

It would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine Hayakawa's disclosure with the limitation of and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

As to claim 10 Hayakawa teaches a computer readable storage medium encoded with computer executable instructions, which when executed by a computer, cause a communication terminal, which includes a database storing a plurality of content data, to perform a method for updating a database schema comprising:

Hayakawa teaches requesting that an update- information providing apparatus should provide update-information "..." and update information about a database schema (Par. 0010 Hayakawa discloses information about a database needs to be updated. Wherein "requesting" is seen as initiating, wherein "database schema" is seen as information about a database and wherein "update-information" is seen as update file);

"...about a latest version of a program used for the content data on the communication terminal..." (Par. 0010 and 0011 Hayakawa discloses initiating a notification that application data needs to be updated. Wherein "program to install" is seen as application data).

Hayakawa reference does not teach but Hu teaches corresponding to the latest version, the database schema indication what types of information related to the content data an be stored in the database for each of the plurality of content data in the format

of a table (Par. 0047 Hu discloses the XML schema containing the type of data that is located in the data. Wherein "content data" is seen as data).

It would have been obvious for a person of ordinary skill in the art at the time of the invention **was made** to combine Hayakawa's disclosure with the limitation of having the schema information to contain data that relates to the type of data that can be stored with the data content.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

The combined teaching of Hayakawa and Hu reference further teaches the following:

receiving the update-information about the program and the update-information about the database schema, both transmitted from the update-information providing apparatus in response to the request (Par. 0010 Hayakawa discloses receiving a notification that application data needs and information about a database needs to be updated);

updating the program in accordance with the update-information about the program (Par. 0010 Hayakawa discloses updating the application data with the update file);

comparing the database schema used by the program with the database schema mounted, in accordance with the update-information about the database schema, already used by the communication terminal in terms of version (Par. 0011 Hayakawa

discloses comparing the identification numbers of the application data with the database based upon the update file. Par. 0138 Hayakawa discloses updating information by writing over the previous versions based upon the update file);

updating the database schema used by the communication terminal, in accordance with the updated-information about the database schema, when it is determined in the comparing step that the database schema needs to be updated (Par. 0010 Hayakawa discloses updating the database with the update file).

Hayakawa in combination with Hu does not teach but Srinivasan teaches a database schema which includes instructions on how to modify a database schema already used by the communication terminal to and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data (Par. Col. 13 Lines 45-65 Srinivasan discloses providing a sample to be used to modify the schema. Srinivasan discloses storing metadata related to the descriptions of the related multimedia content).

Wherein updating the database schema includes a least modifying a number of columns in the table format of the database schema while the plurality of content data remains stored in a consistent state in the database (Col. 6 Lines 26-30 Srinivasan discloses modifying the table rows in the schema with the data remaining constant).

It would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine Hayakawa's disclosure with the limitation of and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

As to claim 11 Hayakawa teaches a computer readable storage medium encoded with computer executable instructions, which was executed by a computer, cause an update-information providing apparatus to perform a method for providing update information to a communication terminal which as a database storing a plurality of content data, the method comprising:

Hayakawa teaches storing … communication terminal and update-information for a database schema (Par. 0004 and Par. 0011 Hayakawa discloses storing update information. Wherein "update-information for a program" and "update-information for a database" is seen as information).

"… update-information for a latest version of a program used for the content data on the…" (Par. 0010 and 0011 Hayakawa discloses initiating a notification that application data needs to be updated. Wherein "program to install" is seen as application data).

Hayakawa reference does not teach but Hu teaches corresponding to the latest version, the database schema indication what types of information related to the content data an be stored in the database for each of the plurality of content data in the format of a table (Par. 0047 Hu discloses the XML schema containing the type of data that is located in the data. Wherein "content data" is seen as data).

It would have been obvious for a person of ordinary skill in the art at the time of the invention **was made** to combine Hayakawa's disclosure with the limitation of having the schema information to contain data that relates to the type of data that can be stored with the data content.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

The combined teaching of Hayakawa and Hu reference further teaches the following:

transmitting the update-information for the program and the update-information for the database schema to the communication terminal when the communication terminal requests the update-information for the program and the update-information for the database schema (Par. 0010 Hayakawa discloses transmitting the update information when an update is initiated);

wherein the program is updated in the communication terminal in accordance with the update-information for the program (Par. 0010 Hayakawa discloses updating the application data with the update file);

the database schema used by the program and the database schema already used by the communication terminal are compared in terms of version in accordance with the update-information for the database schema (Par. 0011 Hayakawa discloses comparing the identification numbers of the application data with the database based

upon the update file.   Par. 0138 Hayakawa discloses updating information by writing over the previous versions based upon the update file); and

and the database schema used by the communication terminal is updated in accordance with the update- information about the database schema, when it is determined from the result of comparison that the database schema needs to be updated (Par. 0010 Hayakawa discloses updating the database with the update file).

Hayakawa in combination with Hu does not teach but Srinivasan teaches a database schema which includes instructions on how to modify a database schema already used by the communication terminal to and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data (Par. Col. 13 Lines 45-65 Srinivasan discloses providing a sample to be used to modify the schema. Srinivasan discloses storing metadata related to the descriptions of the related multimedia content).

Wherein updating the database schema includes a least modifying a number of columns in the table format of the database schema while the plurality of content data remains stored in a consistent state in the database (Col. 6 Lines 26-30 Srinivasan discloses modifying the table rows in the schema with the data remaining constant).

It would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine Hayakawa's disclosure with the limitation of and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

As to claim 12 Hayakawa teaches a communication terminal comprising:

Hayakawa teaches a processor (Par. 0063 Hayakawa discloses a central processing unit. Where "processor" is seen as central processing unit);

a memory for storing a database which stores a plurality of content data (Par. 0063 Hayakawa discloses a memory for storing);

requesting unit configured to request that an update-information providing apparatus provide update-information "..." and update information about a database schema (Par. 0010 Hayakawa discloses information about a database needs to be updated. Wherein "requesting" is seen as initiating, wherein "database schema" is seen as information about a database and wherein "update-information" is seen as update file);

"...about a latest version of a program used for the content data on the communication terminal..." (Par. 0010 and 0011 Hayakawa discloses initiating a notification that application data needs to be updated. Wherein "program to install" is seen as application data);

Hayakawa reference does not teach but Hu teaches corresponding to the latest version, the database schema indication what types of information related to the content data an be stored in the database for each of the plurality of content data in the format

of table (Par. 0047 Hu discloses the XML schema containing the type of data that is located in the data. Wherein "content data" is seen as data).

It would have been obvious for a person of ordinary skill in the art at the time of the invention **was made** to combine Hayakawa's disclosure with the limitation of having the schema information to contain data that relates to the type of data that can be stored with the data content.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

The combined teaching of Hayakawa and Hu reference further teaches the following:

a receiving unit configured to receive the update-information about the program and the update-information about the database schema, both transmitted from the update- information providing apparatus in response to the request (Par. 0010 Hayakawa discloses receiving a notification that application data needs and information about a database needs to be updated);

a program-updating unit configured to update the program in accordance with the update-information about the program (Par. 0010 Hayakawa discloses updating the application data with the update file, wherein "update information" is seen as the update file);

a comparing unit configured to compare the database schema used by the updated program with the database schema already used by the communication

terminal, in accordance with the update-information about the database schema, in terms of version (Par. 0011 Hayakawa discloses comparing the identification numbers of the application data with the database based upon the update file. Par. 0138 Hayakawa discloses updating information by writing over the previous versions based upon the update file); and

a database schema updating unit configured to update the database schema used by the communication terminal, in accordance with the update-information about the database schema, when the comparing unit determines that the database schema needs to be updated (Par. 0010 Hayakawa discloses updating the database with the update file. Wherein "communication terminal" is seen as any computing device).

Hayakawa in combination with Hu does not teach but Srinivasan teaches a database schema which includes instructions on how to modify a database schema already used by the communication terminal to and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data (Par. Col. 13 Lines 45-65 Srinivasan discloses providing a sample to be used to modify the schema. Srinivasan discloses storing metadata related to the descriptions of the related multimedia content).

Wherein updating the database schema includes a least modifying a number of columns in the table format of the database schema while the plurality of content data remains stored in a consistent state in the database (Col. 6 Lines 26-30 Srinivasan discloses modifying the table rows in the schema with the data remaining constant).

It would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine Hayakawa's disclosure with the limitation of and indicating a configuration for storing the types of information related to the content data in the database for each of the plurality of content data.

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to provide the system with the knowledge of knowing that type of data can be stored in the data content.

4.   Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa in combination with Hu and Srinivasan as applied to claim 1 above, and further in view of Anderson U.S. Patent No. 6,298,401 (herein as 'Anderson').

As to claim 2 Hayakawa in combination with Hu and Srinivasan teaches each and every limitation of claim 1.

Hayakawa in combination with Hu does not teach but Anderson teaches wherein in updating the database schema, accesses to the database from the program are inhibited while the database schema is being updated (Col. 16 Line 6-9 Anderson discloses prohibiting access while the database is being updated).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to combine the teaching of Hayakawa and Hu reference with the limitation of prohibiting access while the database is updating.

One would have been motivated to make this combination in order to prevent a user from accessing the database during an update operation that way to keep the data coherent, e.g., which would prevent erroneous data access.

As to claim 3 Hayakawa in combination with Hu, Srinivasan and Anderson teaches each and every limitation of claim 2.

In addition Anderson teaches wherein in updating the database schema, accesses to the database from any application in the program is inhibited while the database schema is being updated (Col. 16 Line 6-9 Anderson discloses prohibiting access while the data is being updated).

5.   Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa in combination with Hu and Srinivasan as applied to claim 1 above, and further in view of Gautam et al U.S. Patent No. 5,956,704 (herein as 'Gautam').

As to claim 4 Hayakawa in combination with Hu and Srinivasan teaches each and every limitation of claim 1.

Hayakawa in combination with Hu and Srinivasan does not teach but Gautam teaches wherein in updating the database schema, the database schema is inhibited from being updated while the program is accessing the database (Col. 4 Line 60-65 Gautam discloses locking the database from any write commands while being accessed).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to combine the teaching of the Hayakawa and Hu reference with the limitation of prohibiting access while the database is updating.

One would have been motivated to make this combination in order to prevent an update while the database is being accessed. One would be motivated to prevent updating a database while it is being accessed so that when the system does do an update the information is current and not out dated because the database was accessed while the database was being updated.

As to claim 5 Hayakawa in combination with Hu, Srinivasan and Gautam teaches each and every limitation of claim 4.

In addition Gautam teaches wherein in updating the database schema, the database schema is inhibited from being updated while any application in the program is accessing the database (Col. 4 Line 60-65 Gautam discloses locking the database from any write commands while being accessed. Wherein "inhibited" is seen as locking the data from any write commands).

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable by Hayakawa in combination with Hu, Srinivasan and further in view of Debique et al. U.S. Patent Application Publication No. 2002/0184180 (herein as 'Debique').

As to claim 13 Hayakawa in combination with Hu and Srinivasan teaches each and every limitation of claim 1.

Hayakawa in combination with Hu, Srinivasan does not teach but Debique teaches updating a database schema, wherein the content data is audio content that is reproducible at the communication terminal and the columns in the table format of the database schema correspond to information about the audio content (Par. 0056 Debique discloses the schema associated with the data contains data such as audio content. Par. 0062 Debique discloses updating the metadata of the content).

A person of ordinary skill in the art at the time of the invention would have been motivated to make this combination in order to prevent multiple different set of metadata that is created for each media content. (Par. 0005 Debique).

As to claim 14 Hayakawa in combination with Hu and Srinivasan teaches each and every limitation of claim 13.

Hayakawa in combination with Hu, Srinivasan and Debique teaches wherein the columns in the table format of the database schema include at least a title of the audio content and an artist of the audio content (Par. 0056 Debique discloses the schema associated with the data contains data such as the title and artist of the audio content. Par. 0062 Debique discloses updating the metadata of the content).

Response to Arguments

Applicant states that Srinivasan does not teach modifying columns while the data content is located in the database. Col. 14 Lines 60-65 and Col. 15 Lines 1-20 Srinivasan discloses modify the rows and columns that are located in the data schema. The data structure is being modified while the data is still located in the schema. The rows and columns correspond to the object class. In col. 8 Lines 45-51 (Fig. 5) Srinivasan discloses adding a new attribute type to the object class definition. Row 512 which defines the obejct class is modified to incldue the new attribute type as part of the definitition fo the class.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERMAINE MINCEY whose telephone number is (571)270-5010. The examiner can normally be reached on Monday through Thursday 8:30-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Neveen Abel Jalil can be reached on 1-571-272-4074. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. M./ 01/11/2011
Examiner, Art Unit 2165

/Neveen Abel-Jalil/

Supervisory Patent Examiner, Art Unit 2165